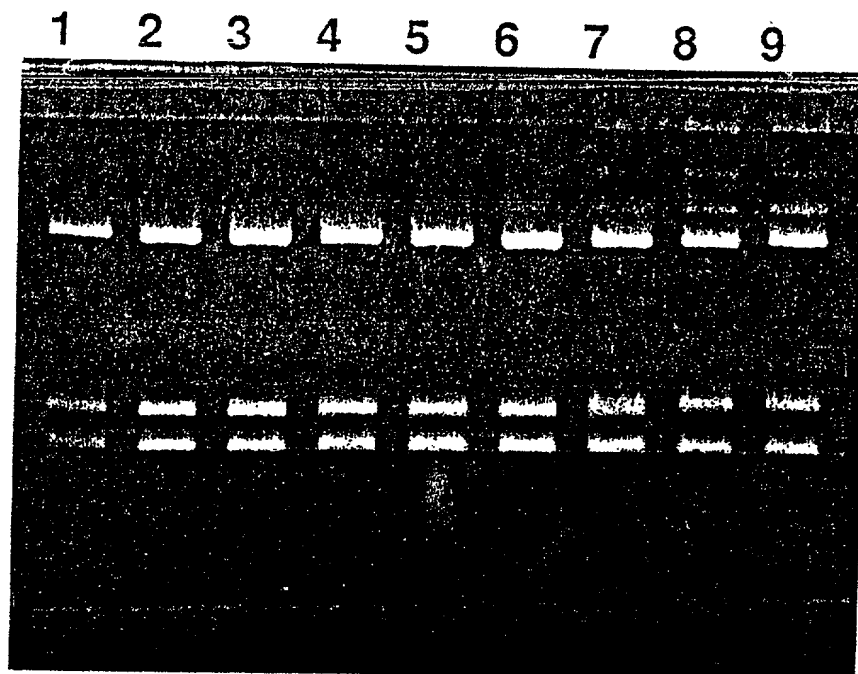
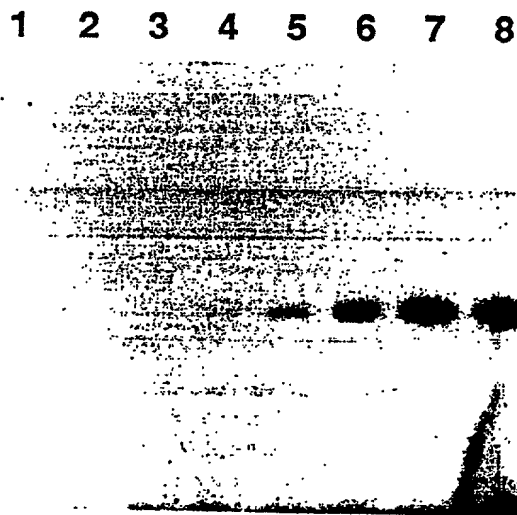


**FIGURE 1:** (A) Restriction map of pALA-D. R = RsaI, P = PstI. Fragments A – D are labeled above the line, with the nucleotide lengths indicated beneath. There is a single SmaI site in fragment D. (B) Branch migration of displacer (open rectangle), bound to linker (filled rectangle), into a recipient duplex with a four base 3'–overhang (PstI end of fragment B). Shown below is the conversion between the displacer–linker duplex bound to the 3' overhang only (left) and following complete branch migration (right). (C) Maximum displacement with specific pALA–D fragments. m = the maximum number of base pairs which can be formed between the displacer and the complementary recipient strand.



**FIGURE 2:** Capture reaction of P-D-BrdC plus P-L-dC. UV fluorogram of 1% agarose gel. Lane 1: RsaI/PstI digested pALA-D (200ng). A, B, C, and D refer to fragments shown in Fig. 1. Lanes 2-9: products following ligation in the presence of P-D-BrdC (6  $\mu$ g/ml), P-L-dC (2  $\mu$ g/ml), and 5 U/ml ligase for 1, 2, 4, 8, 16, 32, 64, and 128 min, respectively.



**FIGURE 3:** Autoradiogram of Fig. 2. Lanes 1-8 correspond to the radiolabeled lanes 2-9 of Fig. 2.

**A.**

1 2 3 4 5 6 7 8

**B.**

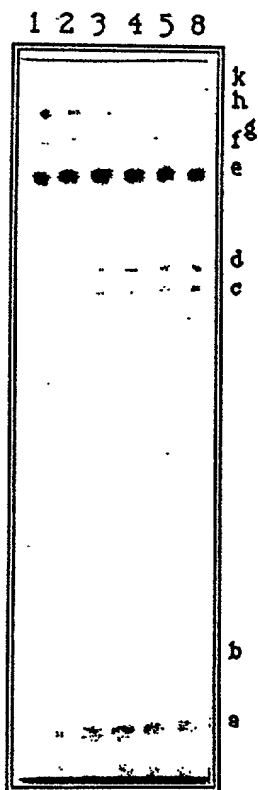
1 2 3 4 5 6 7 8

**C.**

1 2 3 4 5 6 7 8

**FIGURE 4:** (A) Autoradiogram similar to Fig. 3, but with higher ligase concentration and P-D-dC replacing P-D-BrdC. (B) An early time point in an autoadiogram identical to Fig. 3 except using P-D-BrdC-E(10) replacing P-D-BrdC. (C) Autoradiogram identical to Fig. 3 except using P-D-BrdC-E(24) replacing P-D-BrdC.





**FIGURE 6:** Partial Digest Mapping. BCR using pALAD-G4, a derivative of pMS19 containing a genomic fragment of human ALAD, and displacer-linker duplex S-D-BrdC and S-L-dC was followed by partial digestion with Sau3A1. Lanes 1, 2, 3, 4, 5 and 8: partial digestion products formed at 1, 2, 3, 4, 5 and 8 minutes, respectively. Bands a-k are partial digest bands of the sizes expected: 300, 406, 1538, 1598, 2706, 2731, 2748, 3198, and multiple large bands produced by sites within the vector, respectively.

[illegible]